

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2003/001961

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: C07K 7/64, C07K 14/415 // C09D 5/16  
According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: C12P, C07K, C09D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI DATA, EPO-INTERNAL, PAJ, BIOSIS, CA.ABS-DATA

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	STN International, File CAPLUS, CAPLUS accession no. 2003:349308, Document no.138:350024, Marine Biotechnology Institute, Japan "Cyclic peptides, heir manufacture from Haliclona extracts, and antibiofouling agents containing them"; & JP 2003128696	1-8,11,12
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X	US 6335318 B1 (MICHAEL E. SELSTED ET AL), 1 January 2002 (01.01.2002), column 2, line 37 - line 44, abstract	1-8,11,12
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☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

12 March 2004

Date of mailing of the international search report

12-03-2004

Name and mailing address of the ISA/

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PNAS, Volume 98, No 19, Sept 2001, Cameron Jennings et al, "BIOSYNTHESIS AND INSECTICIDAL PROPERTIES OF PLANT CYCLOTIDES: THE CYCLIC KNOTTED PROTEINS FROM OLDENLANDIA AFFINIS", page 10614, column 1; abstract  --	1-12
X	TRENDS IN BIOCHEMICAL SCIENCES, Volume 27, No 3, 2002, Manuela Trabi et al, "CIRCULAR PROTEINS - NO END IN SIGHT" page 133  --	1-12
X	Letters in Peptide Science, Volume 8, 2002, David J. Craik et al, "DISCOVERY AND STRUCTURES OF THE CYCLOTIDES: NOVEL MACROCYCLIC PEPTIDES FROM PLANTS", abstract  --	1-12
X	US 4342751 A (RICHARD E. MOORE ET AL), 3 August 1982 (03.08.1982), column 1, line 9 - line 16; column 6, line 51 - column 7, line 7, abstract  -- -----	1-8,11,12

INTERNATIONAL SEARCH REPORT  
Information on patent family members

27/02/2004

International application No.

PCT/SE 2003/001961

US	6335318	B1	01/01/2002	AU	4837300	A	21/11/2000
				CA	2372821	A	16/11/2000
				EP	1187850	A	20/03/2002
				US	6514727	B	04/02/2003
				US	2003162718	A	28/08/2003
				WO	0068265	A	16/11/2000
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US	4342751	A	03/08/1982	BR	8201231	A	18/01/1983
				CA	1188683	A	11/06/1985
				DE	3261418	D	00/00/0000
				DK	98182	A	10/09/1982
				EP	0060121	A,B	15/09/1982
				SE	0060121	T3	
				GB	2094805	A,B	22/09/1982
				GR	75171	A	13/07/1984
				IL	65165	A	31/12/1984
				JP	57159795	A	01/10/1982
				KR	8601001	B	26/07/1986

**INTERNATIONAL SEARCH REPORT**

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**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

**See extra sheet.**

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

The following separate inventions were identified:

Invention I:

Claim 1-8, 11 (partially), 12 (partially)

Invention I relates to an on-growth inhibiting agent, for the inhibition and/or prevention of on-growth of biological organisms on objects or living beings, said agent comprising at least one cyclotide, and a suitable carrier medium.

Invention II:

Claim 9, 10, 11 (partially), 12 (partially)

Invention II relates to a plant extract containing cyclotides.

The invention lacks unity of inventions as required by Article 3(4)(iii) and Rule 13 PCT for the following reasons:

The common technical features of invention I and II is the cyclotide. Cyclotides are well known in the art (see the cited documents in the ITS-search report). Accordingly, the inventions do not have common solution and further no common characteristic not previously known in the art.

Therefore, it is concluded that the application lacks the required unity of invention.